



1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/937,862B

DATE: 10/09/2003

TIME: 12:20:10

Input Set : A:\W124859.txt

Output Set: N:\CRF4\10092003\I937862B.raw

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OCT 16 2003

TECH CENTER 1600/2500

4 <110> APPLICANT: Oberste, M. Steven
 5 Maher, Kaija
 6 Kilpatrick, David R.
 7 Pallansch, Mark A.
 10 <120> TITLE OF INVENTION: TYPING OF HUMAN ENTEROVIRUSES
 13 <130> FILE REFERENCE: 14114.0353U2
 15 <140> CURRENT APPLICATION NUMBER: 09/937,862B
 16 <141> CURRENT FILING DATE: 2001-09-28
 18 <150> PRIOR APPLICATION NUMBER: PCT/US00/07828
 19 <151> PRIOR FILING DATE: 2000-03-24
 21 <150> PRIOR APPLICATION NUMBER: 60/127,464
 22 <151> PRIOR FILING DATE: 1999-03-31
 24 <160> NUMBER OF SEQ ID NOS: 89
 26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
 28 <210> SEQ ID NO: 1
 29 <211> LENGTH: 20
 30 <212> TYPE: DNA
 31 <213> ORGANISM: Artificial Sequence
 33 <220> FEATURE:
 34 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
 35 synthetic construct
 38 <400> SEQUENCE: 1
 39 gcrtgcaatg aytcttcwgt
 41 <210> SEQ ID NO: 2
 42 <211> LENGTH: 18
 43 <212> TYPE: DNA
 44 <213> ORGANISM: Artificial Sequence
 46 <220> FEATURE:
 47 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
 48 synthetic construct
 W--> 51 <221> NAME/KEY: misc_feature
 52 <222> LOCATION: (1)...(18)
 53 <223> OTHER INFORMATION: n = a, t, c or g
 W--> 55 <400> 2
 W--> 56 ngcnccdgat tgntgscg
 58 <210> SEQ ID NO: 3
 59 <211> LENGTH: 20
 60 <212> TYPE: DNA
 61 <213> ORGANISM: Artificial Sequence
 63 <220> FEATURE:
 64 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
 65 synthetic construct
 W--> 68 <221> NAME/KEY: misc_feature

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18

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69 <222> LOCATION: (1)...(20)
70 <223> OTHER INFORMATION: n = a, t, c or g
W--> 72 <400> 3
W--> 73 gncncngayt gntgnccraa 20
75 <210> SEQ ID NO: 4
76 <211> LENGTH: 20
77 <212> TYPE: DNA
78 <213> ORGANISM: Artificial Sequence
80 <220> FEATURE:
81 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
82     synthetic construct\
W--> 85 <221> NAME/KEY: misc_feature
86 <222> LOCATION: (1)...(20)
87 <223> OTHER INFORMATION: n = a, t, c or g
W--> 89 <400> 4
W--> 90 atgtaygtnc cncncngngg 20
92 <210> SEQ ID NO: 5
93 <211> LENGTH: 20
94 <212> TYPE: DNA
95 <213> ORGANISM: Artificial Sequence
97 <220> FEATURE:
98 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
99     synthetic construct
W--> 102 <221> NAME/KEY: misc_feature
103 <222> LOCATION: (1)...(20)
104 <223> OTHER INFORMATION: n = a, t, c or g
W--> 106 <400> 5
W--> 107 ggngcrttnc cytongtcca 20
109 <210> SEQ ID NO: 6
110 <211> LENGTH: 20
111 <212> TYPE: DNA
112 <213> ORGANISM: Artificial Sequence
114 <220> FEATURE:
115 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
116     synthetic construct
W--> 119 <221> NAME/KEY: misc_feature
120 <222> LOCATION: (1)...(20)
121 <223> OTHER INFORMATION: n = a, t, c or g
W--> 123 <400> 6
W--> 124 acrtgncnng tytgcatngt 20
126 <210> SEQ ID NO: 7
127 <211> LENGTH: 18
128 <212> TYPE: DNA
129 <213> ORGANISM: Artificial Sequence
131 <220> FEATURE:
132 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
133     synthetic construct
W--> 136 <221> NAME/KEY: misc_feature
137 <222> LOCATION: (1)...(18)

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138 <223> OTHER INFORMATION: n = a, t, c or g
W--> 140 <400> 7
W--> 141 awnttytayg ayggntgg 18
143 <210> SEQ ID NO: 8
144 <211> LENGTH: 20
145 <212> TYPE: DNA
146 <213> ORGANISM: Artificial Sequence
148 <220> FEATURE:
149 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
150     synthetic construct
W--> 153 <221> NAME/KEY: misc_feature
154 <222> LOCATION: (1)...(20)
155 <223> OTHER INFORMATION: n = a, t, c or g
W--> 157 <400> 8
W--> 158 tananngtnc ccatrttrtt 20
160 <210> SEQ ID NO: 9
161 <211> LENGTH: 20
162 <212> TYPE: DNA
163 <213> ORGANISM: Artificial Sequence
165 <220> FEATURE:
166 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
167     synthetic construct
W--> 170 <221> NAME/KEY: misc_feature
171 <222> LOCATION: (1)...(20)
172 <223> OTHER INFORMATION: n = a, t, c or g
W--> 174 <400> 9
W--> 175 atgtayrtn cncnggngc 20
177 <210> SEQ ID NO: 10
178 <211> LENGTH: 20
179 <212> TYPE: DNA
180 <213> ORGANISM: Artificial Sequence
182 <220> FEATURE:
183 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
184     synthetic construct
W--> 187 <221> NAME/KEY: misc_feature
188 <222> LOCATION: (1)...(20)
189 <223> OTHER INFORMATION: n = a, t, c or g
W--> 191 <400> 10
W--> 192 ggnggnggrt cngtnakytt 20
194 <210> SEQ ID NO: 11
195 <211> LENGTH: 20
196 <212> TYPE: DNA
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
201     synthetic construct
W--> 204 <221> NAME/KEY: misc_feature
205 <222> LOCATION: (1)...(20)
206 <223> OTHER INFORMATION: n = a, t, c or g

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```

W--> 208 <400> 11
W--> 209 gangaraayc tnatngarac 20
    211 <210> SEQ ID NO: 12
    212 <211> LENGTH: 19
    213 <212> TYPE: DNA
    214 <213> ORGANISM: Artificial Sequence
    216 <220> FEATURE:
    217 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
    218     synthetic construct
W--> 221 <221> NAME/KEY: misc_feature
    222 <222> LOCATION: (1)...(19)
    223 <223> OTHER INFORMATION: n = a, t, c or g
W--> 225 <400> 12
W--> 226 cccatnakrt cnatrtcac 19
    228 <210> SEQ ID NO: 13
    229 <211> LENGTH: 20
    230 <212> TYPE: DNA
    231 <213> ORGANISM: Artificial Sequence
    233 <220> FEATURE:
    234 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
    235     synthetic construct
W--> 238 <221> NAME/KEY: misc_feature
    239 <222> LOCATION: (1)...(20)
    240 <223> OTHER INFORMATION: n = a, t, c or g
W--> 242 <400> 13
W--> 243 gtrctyacna nnagrtcyc 20
    245 <210> SEQ ID NO: 14
    246 <211> LENGTH: 19
    247 <212> TYPE: DNA
    248 <213> ORGANISM: Artificial Sequence
    250 <220> FEATURE:
    251 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
    252     synthetic construct
W--> 255 <221> NAME/KEY: misc_feature
    256 <222> LOCATION: (1)...(19)
    257 <223> OTHER INFORMATION: n = a, t, c or g
W--> 259 <400> 14
    260 tsaarytgtg caargacac 19
    262 <210> SEQ ID NO: 15
    263 <211> LENGTH: 18
    264 <212> TYPE: DNA
    265 <213> ORGANISM: Artificial Sequence
    267 <220> FEATURE:
    268 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
    269     synthetic construct
W--> 272 <221> NAME/KEY: misc_feature
    273 <222> LOCATION: (1)...(18)
    274 <223> OTHER INFORMATION: n = a, t, c or g
W--> 276 <400> 15

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Input Set : A:\W124859.txt

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```

277 stgyccagat ttcagtgt
279 <210> SEQ ID NO: 16
280 <211> LENGTH: 20
281 <212> TYPE: DNA
282 <213> ORGANISM: Artificial Sequence
284 <220> FEATURE:
285 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
286     synthetic construct
W--> 289 <221> NAME/KEY: misc_feature
290 <222> LOCATION: (1)...(20)
291 <223> OTHER INFORMATION: n = a, t, c or g
W--> 293 <400> 16
W--> 294 ggnacncayr tnathtggga
296 <210> SEQ ID NO: 17
297 <211> LENGTH: 20
298 <212> TYPE: DNA
299 <213> ORGANISM: Artificial Sequence
301 <220> FEATURE:
302 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
303     synthetic construct
W--> 306 <221> NAME/KEY: misc_feature
307 <222> LOCATION: (1)...(20)
308 <223> OTHER INFORMATION: n = a, t, c or g
W--> 310 <400> 17
W--> 311 gccntrtrtnt grtgnccraa
313 <210> SEQ ID NO: 18
314 <211> LENGTH: 20
315 <212> TYPE: DNA
316 <213> ORGANISM: Artificial Sequence
318 <220> FEATURE:
319 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
320     synthetic construct
W--> 323 <221> NAME/KEY: misc_feature
324 <222> LOCATION: (1)...(20)
325 <223> OTHER INFORMATION: n = a, t, c or g
W--> 327 <400> 18
W--> 328 ggnacncayr tnrnttggga
330 <210> SEQ ID NO: 19
331 <211> LENGTH: 20
332 <212> TYPE: DNA
333 <213> ORGANISM: Artificial Sequence
335 <220> FEATURE:
336 <223> OTHER INFORMATION: Description of Artificial Sequence; Note =
337     synthetic construct
W--> 340 <221> NAME/KEY: misc_feature
341 <222> LOCATION: (1)...(20)
342 <223> OTHER INFORMATION: n = a, t, c or g
W--> 344 <400> 19
W--> 345 acngcngyng aracnggnca

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/09/937,862B

DATE: 10/09/2003
TIME: 12:20:11

Input Set : A:\W124859.txt
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 1,4,13
Seq#:3; N Pos. 3,6,12,15
Seq#:4; N Pos. 9,12,15,18
Seq#:5; N Pos. 3,9,15
Seq#:6; N Pos. 6,8,9,18
Seq#:7; N Pos. 3,15
Seq#:8; N Pos. 3,5,6,9
Seq#:9; N Pos. 9,12,15,18
Seq#:10; N Pos. 3,6,12,15
Seq#:11; N Pos. 3,12,15
Seq#:12; N Pos. 6,12
Seq#:13; N Pos. 9,11,12
Seq#:16; N Pos. 3,6,12
Seq#:17; N Pos. 4,9,15
Seq#:18; N Pos. 3,6,12,15
Seq#:19; N Pos. 3,6,9,15,18
Seq#:20; N Pos. 3,6,9,15,18
Seq#:21; N Pos. 6,9,15,18
Seq#:22; N Pos. 2,5,8,11
Seq#:81; Xaa Pos. 3,5
Seq#:82; Xaa Pos. 3
Seq#:83; Xaa Pos. 3
Seq#:84; Xaa Pos. 7
Seq#:86; Xaa Pos. 2,3,7

VERIFICATION SUMMARY

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PATENT APPLICATION: US/09/937,862B

TIME: 12:20:11

Input Set : A:\W124859.txt

Output Set: N:\CRF4\10092003\I937862B.raw

L:51 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:55 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:2
L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:0
L:68 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:72 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:3
L:73 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3 after pos.:0
L:85 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:89 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:4
L:90 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4 after pos.:0
L:102 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:106 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:5
L:107 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:0
L:119 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:123 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:6
L:124 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6 after pos.:0
L:136 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:140 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:7
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7 after pos.:0
L:153 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:157 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:8
L:158 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8 after pos.:0
L:170 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:174 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:9
L:175 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:0
L:187 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:191 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:10
L:192 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10 after pos.:0
L:204 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:208 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:11
L:209 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11 after pos.:0
L:221 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:225 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:12
L:226 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12 after pos.:0
L:238 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:242 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:0
L:255 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:259 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:14
L:272 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:276 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:15
L:289 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:293 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:16
L:294 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16 after pos.:0
L:306 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:310 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:17
L:311 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:323 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:327 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:18

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L:328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18 after pos.:0
L:340 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:344 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:19
L:345 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:0
L:357 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:361 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:20
L:362 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:0
L:374 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:378 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:21
L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21 after pos.:0
L:391 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:395 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:22
L:396 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0
L:1972 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:1976 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:81
L:1977 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:0
L:1990 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:1994 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:82
L:1995 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:0
L:2008 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2012 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:83
L:2013 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:0
L:2026 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2030 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:84
L:2031 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:84 after pos.:0
L:2058 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2062 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:86
L:2063 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86 after pos.:0